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Propelling pride to promote healthy food choices among entity and incremental theorists

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ABSTRACT

Past research suggests that people's beliefs about the malleability of their body weight influence their motivation to engage in healthful behaviors: people who perceive their body weight as fixed (entity theorists) engage less in healthful behaviors than people who perceive their body weight as changeable (incremental theorists). Accordingly, current health interventions frequently aim at shifting entity theorists' beliefs about the malleability of their body weight. Instead of trying to change these beliefs, we test whether the elicitation of pride from past achievements can serve as an intervention to promote healthful behaviors among entity theorists. In addition, we contrast the effect of pride recall among entity theorists with the effect among incremental theorists. Specifically, we find that entity theorists chose healthier behaviors upon the recall of pride related and unrelated to the health domain – the source of pride does not seem to matter. For incremental theorists, however, the source of pride does matter. While health-related pride led them to persist in making healthy food choices, health-unrelated pride instilled reward-seeking behavior among incremental theorists. Prompting health-related pride might be a viable motivational tool to promote healthy food choices, as it is beneficial for entity theorists without thwarting the motivation of incremental theorists.

1. Introduction

The growing obesity epidemic has made weight management a common concern in people's daily lives. Although the causes of obesity are manifold and include various individual and environmental factors (Swinburn et al., 2011), people frequently adopt simplistic beliefs about their personal ability to control their weight. While some people feel confident that they are able to maintain a healthy weight if they dedicate a sufficient amount of effort to weight-related goals, others may feel like they have little personal control over their weight. These opposing beliefs about the malleability of human attributes – in this context, body weight – are referred to as implicit theories (Dweck, 2000; Dweck & Leggett, 1988) and take on two broad forms: entity theories and incremental theories. *Entity theories* represent beliefs that personal attributes, such as intelligence, athleticism, or willpower, are fixed and cannot be changed, whereas *incremental theories* refer to beliefs that personal attributes can be developed through effort over time.

Prior research suggests that implicit theories have different implications for how people approach the goal-striving process (Burnette, O'Boyle, VanEpps, Pollack, & Finkel, 2013). In the health domain, implicit theories predict differing levels of engagement in a range of health behaviors, such as smoking cessation (Thai, Coa, & Kaufman, 2018), physical activity (e.g., Lyons, Kaufman, & Rima, 2015; Parent & Alquist, 2016), and healthy eating (e.g., Burnette & Finkel, 2012; Ehrlinger, Burnette, Park, Harrold, & Ovidas, 2017). For instance, people who perceive their body weight as fixed and unchangeable (entity theorists) generally engage less in healthful behaviors such as exercising and healthy eating (Ehrlinger, Burnette, Park, Harrold, & Orvidas, 2017; Lyons et al., 2015; Parent & Alquist, 2016) and are more likely to give up on dieting after initial setbacks (Burnette, 2010; Burnette & Finkel, 2012) compared with people who believe their body weight is changeable (incremental theorists). Therefore, implicit theories are consequential for a multitude of physical health outcomes, including blood glucose levels and body mass index (Parent & Alquist, 2016).

A reason for the maladaptive behaviors among entity theorists appears to be doubt about their personal ability to successfully engage in healthful behaviors and change their body weight (Ehrlinger et al., 2017). To promote engagement in healthful behaviors among entity

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theorists, past research administered interventions to change participants' beliefs about the malleability of their body weight – for example, researchers induced entity theorists to adopt an incremental theory of body weight as a way to promote weight loss (Burnette & Finkel, 2012) or reduce unhealthy snacking (Ehrlinger et al., 2017). However, more recent research suggests that enticing entity theorists to adopt incremental theories of body weight might not always be an effective strategy as these lay beliefs are sometimes associated with negative outcomes, including stronger internalized self-stigma and body shame (Burnette, Hoyt, Dweck, & Auster-Gussman, 2017).

In this research, we propose a way of motivating entity theorists to make healthier food choices that does not involve a mindset change. Drawing on the pride literature, we suggest that the recall of a past achievement that elicited pride could spur entity theorists to engage in healthful behaviors to the same extent incremental theorists already do. Individuals experience pride when they credit themselves for a success in a self-relevant domain (Tracy & Robins, 2004). Owing to its inherent link to achievement, pride may serve as a validation of entity theorists' ability to successfully pursue a healthy lifestyle goal – they have succeeded before and therefore should be able to succeed again. Simultaneously, pride could motivate incremental theorists to strive for more achievement in the health domain.

However, despite ample evidence suggesting that pride reinforces adaptive behaviors, caution is necessary when eliciting pride based on prior achievements in different domains. More recent research shows that pride can sometimes backfire and undermine the pursuit of a greater health-related goal. Especially in domains that are unrelated to the pride-eliciting experience, pride appears to stimulate reward-seeking behaviors (e.g., Salerno, Laran, & Janiszewski, 2015; Wilcox, Kramer, & Sen, 2011).

Through this research, we strive for a more nuanced understanding of the specific circumstances under which the experience of pride from past achievements can serve as a motivational tool for both entity and incremental theorists. We argue that whether or not pride motivates healthful behaviors is the result of an intricate interplay between the source of the pride experience and an individual's beliefs about the malleability of body weight. Across two studies, we examine how the recall of a pride experience that is *related* (e.g., a prior healthy food choice) to the health domain and the recall of a pride experience that is *unrelated* (e.g., a prior smart spending decision) to the health domain can influence entity theorists' healthful behaviors without demotivating incremental theorists. An effective intervention should promote adaptive behaviors among entity theorists without backfiring by stimulating maladaptive behaviors among incremental theorists.

2. Background and hypotheses

2.1. Implicit theories and attributions

Implicit theories relate to schematic knowledge structures incorporating beliefs about the malleable versus fixed nature of human attributes to guide self-regulatory processes and outcomes (Burnette, O'Boyle, VanEpps, Pollack, & Finkel, 2013; Molden & Dweck, 2006). Similar to scientific theories, people draw on their implicit (lay) theories to explain observable phenomena and make sense of the world (Plaks, 2017). Entity versus incremental beliefs can vary across domains and are as such theorized to be highly context-specific (Dweck, 2000). For instance, an individual who believes her intelligence cannot be changed (i.e., an entity theory of intelligence) may still believe she is readily able to change her body weight (i.e., an incremental theory of body weight) or vice versa.

Although these beliefs oftentimes operate outside people's conscious awareness, they can have a powerful influence on people's cognitive, affective, and behavioral patterns (Molden & Dweck, 2006). Past research on implicit theories suggests that entity versus incremental theorists' opposing beliefs about the malleability of human attributes induces them to adopt distinct attributions (Hong, Chiu, Dweck, Lin, & Wan, 1999). Attribution is the process through which individuals try to explain why an incident occurred in order to assign responsibility and meaning to successes and failures (Weiner, 1972). Two perceived causes of success or failure are ability and effort, where ability refers to stable attributes of the person, such as skill ("Is someone *able* to perform a behavior?") and effort refers to fluctuating levels of intention ("Does someone *try* to perform a behavior?"); Heider, 1958). Incremental theorists, who perceive their personal attributes as malleable, tend to attribute success or failure to sufficient or insufficient expenditure of effort – an unstable but controllable cause. Conversely, entity theorists, who perceive their personal attributes as fixed, tend to attribute success and failure directly to their ability – a stable and uncontrollable cause – and usually discount the role of effort (Hong et al., 1999).

Owing to their belief that body weight is fixed (e.g., "Some people are born thin, while others are not"), entity theorists may perceive their body weight as more difficult to control than incremental theorists. Difficult tasks generally decrease people's perceived self-efficacy and therefore their expectations of success, which can evoke avoidant coping strategies (Weiner, 2000). *Self-efficacy* refers to "the perception that one has the requisite skills and competencies to take on and succeed at tasks that are instrumental to one's goals" (Weidman, Tracy, & Elliot, 2016, p. 609) and is thought to motivate individuals to exert effort to reach a goal (Bandura, 1977). As a consequence of their belief that they cannot change their body weight, entity theorists may have lower faith in their ability to successfully engage in healthful behaviors. Simultaneously, their belief that one simply does or does not possess valued personal traits and characteristics, such as the ability to control one's body weight, makes entity theorists particularly concerned about maintaining an image of possessing that skill. Thus, they typically feel anxious that they might fail at weight management inducing them to avoid these behaviors altogether (Burnette & Finkel, 2012; Ehrlinger et al., 2017) – after all, someone who does not try cannot fail. Incremental theorists, on the other hand, may not even question their ability to engage in health-related behaviors because they perceive a healthy body weight as the outcome of sufficient expenditure of effort, not innate ability. This belief may explain why incremental theorists are generally more motivated than entity theorists to engage in all sorts of health-related behaviors.

An intervention that aims to promote healthful behaviors among both entity and incremental theorists should increase entity theorist's perceived self-efficacy with respect to weight management while motivating incremental theorists to persist in working toward their weight-related goals. We argue that this effect could be accomplished by inducing a feeling of pride arising from past achievements: entity theorists may interpret pride from a past achievement as a validation of their ability to successfully pursue a health goal, whereas incremental theorists may interpret pride as a signal for the added value of investing effort towards the pursuit of mastery and self-development in the health domain. An intervention based on the recall of pride from past achievements might therefore feed two birds with one scone.

2.2. Pride as a motivational tool

Pride appears to be a useful tool in reinforcing a wide range of adaptive behaviors. Pride is elicited when people credit themselves for achieving a valuable personal standard or goal (Tracy & Robins, 2007). This type of pride is also referred to as *authentic* pride because it is based on a specific achievement (e.g., pride from being fit) and distinct from *hubristic* pride which relates to a general sense of grandiosity based on non-specific, global attributions of successes to the self that are more akin to narcissism (Gilchrist, Pila, Castonguay, Sabiston, & Mack, 2018; Tracy & Robins, 2007). In this research, we study how health-related versus health-unrelated authentic pride (from here on referred to simply as *pride*) affects people's motivation to engage in healthful behavior as a function of their implicit theories of body weight.

Pride is associated with a sense of accomplishment, self-worth, and confidence (Tangney, Stuewig, & Mashek, 2007; Tracy & Robins, 2004, 2007) and has been documented to play a role in an array of activities both related and unrelated to weight management. For instance, pride is elicited when individuals perform well on cognitively demanding tasks (Williams & DeSteno, 2008), refrain from unintended purchases (Mukhopadhyay & Johar, 2007), resist giving in to temptations (Hofmann & Fisher, 2012; Patrick, Chun, & MacInnis, 2009), or make training progress regarding exercise (Gilchrist, Sabiston, Conroy, & Atkinson, 2018). Several studies show that the experience of pride has a positive influence on people's motivation to persist in pursuing achievement (e.g., Hofmann & Fisher, 2012; Patrick et al., 2009; Weidman et al., 2016; Williams & DeSteno, 2008), even when the task is effortful.

Although pride is widely established as a highly adaptive emotion, pride can sometimes also be related to fun-seeking (Carver, Sinclair, & Johnson, 2010) and self-gifting after achievement (Mick & Faure, 1998). Owing to its inherent reward responsiveness, pride can also undermine people's motivation to pursue achievement. Even if exercising restraint may lead to achievement in the long run, success requires forgoing pleasure in the short run (Kivetz & Zheng, 2006). Pride experienced from previous achievements can be construed as a justification for indulgent behavior, thereby allowing people to prioritize short-term pleasure over long-term achievement. For instance, pride can stimulate indulgent behavior when it is misinterpreted as a sign of sufficient goal progress in a completely unrelated domain, where no actual progress has been made (e.g., Salerno et al., 2015; Wilcox et al., 2011). The tendency to use pride as a justification for reward is even evident in young children who performed worse on a delay of gratification task compared with children who experienced joy or no emotion prior to the task (Shimoni, Asbe, Eyal, & Berger, 2016).

We propose that whether pride from previous achievements will stimulate entity and incremental theorists to engage in healthful behaviors or will promote indulgence depends on the relatedness of the pride-eliciting event to the health domain. In the following, we discuss the motivational consequences of experiencing pride from past achievements, both related and unrelated to health, and the extent to which pride from these different sources qualifies as a suitable tool to promote healthful behaviors among entity and incremental theorists.

2.2.1. *Motivating entity theorists*

Entity theorists are motivated to engage in a given behavior to the extent that they believe they will be able to successfully perform that behavior (Burnette et al., 2013; Hong et al., 1999). However, entity theorists' beliefs that their body weight is fixed and is therefore difficult to change may reduce their perceived ability to manage their body weight and consequently their motivation to engage in healthful behaviors to control their weight. Then again, expectations of self-efficacy can be increased through appraisals of prior performance: a previous success on an achievement task leads to higher expectations of success on a similar task in the future (Bandura, 1977).

Past research has established a strong link between the self-conscious emotion pride and concepts such as task self-efficacy (Lazarus, 1991) and self-satisfaction (Herrald & Tomaka, 2002). In particular, pride appears to be useful in motivating behaviors that are perceived to require high levels of ability (Passyn & Sujan, 2012). Further, achievements that are attained through skill or ability typically lead to stronger self-efficacy ascriptions than achievements that are attained through hard work (Schunk, 1983). Past instances of successful engagement in healthful behaviors may thus enhance entity theorists' perceived ability to successfully engage in these behaviors *again* and thereby increase their motivation to make healthier choices. We therefore propose that the recall of a pride experience related to past healthful behaviors serves as an adaptive motivational tool among entity theorists.

H1. Among entity theorists, the recall of a pride experience related to past healthful behaviors will increase subsequent engagement in healthful behavior compared to a situation when no pride is experienced.

The question arises as to whether *any* pride experience would suffice in restoring self-efficacy among entity theorists or whether the beneficial effect of pride on entity theorists' self-efficacy expectations is restricted to achievements relating to health. Prior achievements are generally a potent source of self-efficacy that, once established, can be applied to unrelated situations. That is, improvements in behavioral functioning can occur in contexts that differ substantially from those that led to the initial increase in self-efficacy (Bandura, 1977). Notably, however, these generalization effects occur most for behaviors that are similar to the context in which self-efficacy was initially established (Bandura, Blanchard, & Ritter, 1969). The effect of health-unrelated pride on entity theorists' motivation to engage in healthful behaviors may depend on the extent to which they perceive the pride experience as relevant for forming self-efficacy judgments in the health domain. As such, pride from achievements unrelated to the health domain, such as making smart financial decisions, may have different implications for entity theorists' perceived ability to engage in healthful behaviors.

One possibility is that health-unrelated pride instills a general sense of self-regulatory self-efficacy in entity theorists. If they are able to make smart financial decision under challenging conditions, entity theorists might also be able to successfully pursue their goal of living a healthier lifestyle. As such, pride might increase entity theorists' self-efficacy perceptions through a self-affirmatory mechanism. However, it is also possible that pride based on a smart spending decision may not seem relevant in the health domain and thus uninformative in making self-efficacy judgments with regards to the health domain. Someone may be well able to make great financial decisions and yet perceive themselves as unable to maintain a healthy diet.

Given these considerations it is unclear if the source of pride matters in promoting self-efficacy perceptions among people who perceive their body weight as fixed. As such, we only have a concrete hypothesis for the effect of health-related pride on engagement in healthful behavior among entity theorists, whereas the investigation of the effect of health-unrelated pride on engagement in healthful behavior is of a more exploratory nature – health-unrelated pride may promote healthful behaviors among entity theorists but may well have a weak or no discernible effect.

2.2.2. *Motivating incremental theorists*

In contrast to entity theorists, who tend to set goals that are related to demonstrating that they possess a certain ability in a self-relevant domain, incremental theorists tend to set goals that are related to learning and developing mastery of a valued behavior (Burnette et al., 2013; Hong et al., 1999). We propose that the recall of pride from past achievements could motivate incremental theorists to invest even more effort toward their weight-related goals because of its capacity to signal the importance of achievement in a focal domain. However, we expect that this effect will occur only for pride experiences that are related to the health domain. For incremental theorists, the source of pride should matter.

The affect-as-information literature suggests that emotions can function as proxies of the value of an emotional object – "things that feel good must be desirable, and things that feel bad must be undesirable" (Pham, 2007, p. 161). Pride is the outcome of crediting the self for a self-relevant success. As such, it may amplify the perceived desirability of the specific achievement on which it was based, as people deduce from their feelings of pride that they care about the pride-eliciting outcome. In turn, the more desirable an outcome is perceived to be, the greater the motivation to work to attain it (Bélanger et al., 2016). Thus, the recall of achievements related to health should increase incremental theorists' subsequent engagement in healthful behaviors. An experience sampling study yields preliminary support for this reasoning

(Hofmann & Fisher, 2012). Pride experienced from previous resistance to a temptation led to increased perceptions of goal importance and sustained self-control on subsequent temptations within the same self-regulatory domain, but had no discernible effect on self-control in unrelated domains.

Due to their drive to strive for self-improvement in self-relevant domains, incremental theorists might be particularly sensitive to cues that help them gauge their development in a given domain. We acknowledge that the experience of pride from past health-related achievements could conceivably function as a sign of sufficient progress toward weight-related goals and therefore reduce incremental theorists' inclination to invest effort in healthful behaviors. However, given that pride may enhance the perceived self-relevance of pursuing weight-related goals, we expect that health-related pride may be more likely to enhance perceived health goal commitment thereby increasing incremental theorists' desire for self-improvement and mastery in that domain. After all, it may be difficult to directly violate a health goal if one still feels really good about a previous achievement in the health domain – even if sufficient progress has been made to allow for slack without jeopardizing goal attainment. Beyond avoidance of negative affect from violating a valued goal, pride may boost goal commitment because the experience of pride is rewarding in itself. Pride is an inherently pleasant emotional experience and people may be motivated to maintain this positive emotion by continuing to engage in the same behavior that led to the initial pride experience. For instance, past research shows that anticipated pride from resisting future temptations inhibited the consumption of unhealthy snacks (Patrick et al., 2009; Winterich & Haws, 2011). Hence, we expect that pride originating from achievements in the health domain is likely to positively affect incremental theorists' motivation to engage in healthful behavior.

H2a. Among incremental theorists, the recall of a pride experience related to past healthful behaviors will increase subsequent engagement in healthful behavior compared to a situation when no pride is experienced.

While we are uncertain whether or not entity theorists could be motivated to engage in healthful behavior upon the recall of health-unrelated pride, we expect that health-unrelated pride will negatively affect engagement in healthful behavior among incremental theorists owing to their tendency to attribute pride to effort instead of ability. Effort involved in previous self-restraint can provide people with a justification to violate valued goals (Mukhopadhyay & Johar, 2009), such as maintaining a healthy diet or saving money, without emotional punishment, such as feelings of guilt (Dahl, Honea, & Manchanda, 2003; Kivetz & Zheng, 2006). Past research shows that participants are less likely to make virtuous choices upon the recall of incidental pride experiences that are unrelated to the focal choice domain when their prior achievement was the result of high effort as opposed to low effort (Salerno et al., 2015). Effort attributions based on a previous pride experience that is unrelated to health may promote the inherent reward responsiveness associated with pride without reinforcing the perceived desirability of engaging in healthful behaviors.

Put differently, experiencing pride for following through on an intense series of workouts during the week may well increase the perception that staying fit is a desirable goal, and therefore increase the motivation to exercise the following week. However, workout-related pride will not necessarily increase motivation to resist going on a shopping spree to save money for paying off credit card bills. In the absence of genuine investment in achievement in a focal domain, motivation to restrain oneself may be insufficient, such that the reward component of pride may dominate. For incremental theorists a pride experience that is unrelated to the health domain signals a prior successful expenditure of effort but does not necessarily reinforce the perceived desirability of achievement in the health domain, such that the recall of health-unrelated pride will reduce engagement in healthful behaviors:

H2b. Among incremental theorists, the recall of a pride experience unrelated to past healthful behaviors will decrease subsequent engagement in healthful behavior compared to a situation when no pride is experienced.

3. The present research

To the best of our knowledge, this study is the first to empirically test the effects of pride from related versus unrelated achievements on motivation to pursue achievement in a focal domain. More specifically, we test whether the recall of pride from past achievements – both related *and* unrelated to the health domain – can be used to motivate people who believe their body weight is fixed (entity theorists) to engage more in weight management practices without thwarting the motivation of those who think their body weight is changeable (incremental theorists) and already display higher levels of engagement in weight management. This research contributes to work on the effect of implicit theories on health behaviors and the motivational consequences of the self-conscious emotion of pride. We tested our predictions across two studies in which foodchoice healthiness served as the focal choice domain.

4. Study 1

4.1. Method

4.1.1. Participants and design

We conducted an online study among US consumers ($N = 302$; $M_{age} = 37.1$ years, $SD = 10.8$ years; 53% female, 46% male) via the consumer panel Amazon Mechanical Turk, which is frequently used in food decision-making research (e.g., Haws & Liu, 2016; Parker & Lehmann, 2014). Participants were randomly assigned to one of three conditions, between subjects; we manipulated health-related pride versus health-unrelated pride versus no pride (control condition). Implicit theories of body weight were measured as a continuous moderator for all participants. The data were collected in March 2019 and the reported analyses were conducted in May 2020. The study was approved by the university's Institutional Review Board and all participants provided informed consent before taking part in the study.

4.1.2. Pride elicitation task

Pride was elicited with a recall task in which participants described a past prideful experience of theirs as part of a study on understanding everyday experiences (Salerno et al., 2015). This approach is an established way of manipulating emotions (e.g., Salerno et al., 2015; Wilcox et al., 2011). Participants wrote about either a prideful event related to a recent healthy consumption decision or a prideful event related to a recent spending decision that allowed them to save money, or described what their regular day looks like (control condition). A pretest ($N = 151$) in which participants rated pride on a sliding scale (from 0 = *not at all proud* to 100 = *very proud*) confirmed that participants in the health-related pride condition ($M = 78.35$, $SD = 25.21$, $p < .001$) and the spending-related pride condition ($M = 78.90$, $SD = 21.74$, $p < .001$) experienced pride to a greater extent than participants in the control condition ($M = 54.33$, $SD = 30.70$). Pride levels did not differ between the health-related and spending-related pride conditions ($p = .908$). The instructions of the pretest appear in the supplementary materials.

4.1.3. Dependent measure

After finishing the pride elicitation task, all participants were told that as a token of appreciation for their participation in the study, they had been entered in a lottery. Each participant received seven virtual lottery tickets to allocate between an indulgent "candy box," which consisted of a package of M&Ms, Skittles, and Reese's Pieces, versus a relatively healthier "fruit and nut box," which included a package of Fisher unsalted peanuts, Planters trail mix, and Sun Maid mixed fruits.

The number of tickets participants assigned to the fruit and nut box served as the measure of food choice healthiness. To incentive-align participants and make the allocation of lottery tickets consequential, one in 25 participants could actually win one of the two prize packages (Ding, 2007). Hence, the lottery ticket allocation denoted a real choice.

4.1.4. Implicit theories

Next, we measured participants' implicit theories with a three-item scale adapted from Levy, Stroessner, and Dweck (1998). The three items were "The kind of person someone is, is something basic about them, and it cannot be changed very much"; "People can do things differently, but the important parts of who they are can't really be changed"; "Everyone is a certain kind of person, and there is not much that they can do to really change that" (0 = *strongly disagree to* 10 = *strongly agree*; α = 0.96). All items were reverse coded such that higher values indicated stronger incremental beliefs. Finally, participants indicated their dietary restrictions and responded to demographic measures.

4.2. Statistical analysis

Before conducting the analyses, we excluded 18 participants for failing to follow the manipulation instructions in the writing task or for having dietary restrictions or exhibiting distaste for one or both of the prize packages that constituted the measure of food choice healthiness. The remaining sample comprised of 282 participants.

During the lottery ticket allocation task, participants had to pick a number to evaluate two options. In total, about half of the participants either assigned all ($n_{7\ tickets} = 88$) or none ($n_{0\ tickets} = 64$) of their virtual lottery tickets to the healthier fruit and nut box. The remaining participants ($n_{1\text{-}6\ tickets} = 130$) split their tickets between the two boxes. Guided by the pattern of the distribution, we collapsed the dependent variable into a categorical variable with three levels: the first category comprised of participants assigning 0–2 tickets ($n = 86$; "candy preference"), the second category comprised of participants assigning 3–5 tickets ($n = 99$; "no preference"), and the last category comprised of participants assigning 6–7 tickets ($n = 97$; "fruit and nut preference") to the fruit and nut box (see De Steur et al., 2010). One-way analysis of variance showed that these three categories differed neither in terms of the extent ($F(2, 279) = 1.51, p = .224$) and intensity ($F(2, 279) = 0.61, p = .544$) of their pride experiences, nor in terms of the strength of their incremental beliefs ($F(2, 279) = 1.09, p = .338$).

We applied a multinomial logistic regression to test the association between different sources of pride and implicit theories, including the respective interactions, and the different levels of the dependent variable, food choice healthiness. We used multinomial logistic regression because the three categories of the dependent variable did not represent a meaningful numerical order; the middle category included participants with no clear preference for either the candy or the fruit and nut box. As food choice healthiness consists of three categories, three comparisons are estimated: (1) "no preference" versus the reference category "candy preference", (2) "fruit and nut preference" versus the reference category "candy preference", and (3) "fruit and nut preference" versus the reference category "no preference".

Given that entity versus incremental theories are conceptualized as opposite end points of a continuum, we followed previous research in this domain (e.g., Ehrlinger et al., 2017) and treated implicit theories as a continuous predictor in the estimation of our model. Implicit theories were mean-centered prior to the analyses (M = 5.72, SD = 2.84). The main hypotheses for Study 1 were specified prior to data collection in addition to some exploratory measures. Exploratory measures can be made available upon request.

4.3. Results

The multinomial logistic regression model to predict food choice healthiness suggests that the model fits significantly better than the null model ($\chi^2(10) = 20.77, p = .023$). The Likelihood Ratio tests reveal a significant relationship between the different types of pride and food choice healthiness ($\chi^2(4) = 11.80, p = .019$) as well as non-significant but directional support for an interaction effect between the different types of pride and implicit theories on food choice healthiness ($\chi^2(4) = 7.35, p = .119$). The parameter estimates in Table 1 show the prediction of the probability that a participant belongs to a category of the variable food choice healthiness, compared to another category of this variable, the reference category.

4.3.1. Health-related pride

In line with our hypothesis that the experience of health-related pride promotes food choice healthiness among both entity (H1) and incremental theorists (H2a), the analyses reveal that whether or not participants preferred the fruit and nut box over the candy box (reference category) upon the experience of health-related pride, did not depend on participants' implicit theories. The non-significant interaction between these two variables suggests that irrespective of their implicit theories, participants who experienced health-related pride were significantly more likely to prefer the fruit and nut box over the candy box. More specifically, upon the experience of health-related pride the odds of preferring the fruit and nut box over the candy box increased by 2.72 (95% CI [1.23; 6.00]). Further, the results suggest that participants' likelihood of showing strong preference for the fruit and nut box instead of the candy box significantly increased as a function of their implicit beliefs: as participants' implicit theories increased by one unit relative to the mean (i.e., incremental beliefs becoming stronger), the odds of choosing the fruit and nut box increased by 1.25 (95% CI [1.02; 1.52]). We did not have a hypothesis about this effect, but this finding resonates with previous research on implicit theories which found that incremental theorists generally seem to be more eager to engage in healthful behaviors than entity theorists (e.g., Ehrlinger et al., 2017).

When showing strong preference for the fruit and nut box was compared to showing no preference (reference category), however, the effect of health-related pride was conditional on participants' implicit theories as suggested by a marginally significant interaction effect, which seems to contradict our prediction (H2a) that health-related pride would universally benefit entity *and* incremental theorists. As the strength of participants' implicit theories increased by one unit relative to the mean, the odds of clearly preferring the fruit and nut box relative to having no clear preference decreased by 0.78 (95% CI [0.60; 1.00]). Given that this negative interaction effect only occurs when preference for the fruit and nut box is compared to having no clear preference, we speculate this could be indicative of a potential ceiling effect. Stronger incremental theories generally predict stronger preference for the fruit and nut box. As such, it might be more difficult to boost food choice healthiness with health-related pride among incremental theorists compared with entity theorists. However, we acknowledge that it is difficult to find a definite cause for this effect because we cannot make strong inferences about the motivations that led participants to distribute their tickets between both options more equally.

4.3.2. Spending-related pride

Confirming our prediction that participants' implicit theories determined the likelihood of choosing the fruit and nut box relative to the candy box or showing no clear preference (reference categories) in the spending-related pride condition (H2b), we find significant interaction effects between spending-related pride and implicit theories. As participants' implicit theories increased by one unit relative to the mean (i.e., incremental beliefs becoming stronger), the change in the odds of showing preference for the fruit and nut box compared with showing preference for the candy box decreased by 0.74 (95% CI [0.57; 0.97]). Similarly, the odds of showing preference for the fruit and nut box relative to having no strong preference (reference category) upon the experience of health-unrelated pride decreased by 0.76 (95% CI [0.58;

Table 1
Results of multinomial logistic regression: prediction of the probability that a respondent belongs to a category of the variable food choice healthiness, compared to another category of this variable, the reference category (ref).

	no preference versus candy preference (ref)				fruit and nut preference versus candy preference (ref)				fruit and nut preference versus no preference (ref)			
Variable	*b*	*SE*	χ^2	*p*	*b*	*SE*	χ^2	*p*	*b*	*SE*	χ^2	*p*
Pride (ref: control)												
Health-related	0.062	0.390	0.026	.873	0.999	0.404	6.102	.014	0.937	0.369	6.435	.011
Spending-related	−0.504	0.347	2.103	.147	0.130	0.377	0.120	.729	0.634	0.372	2.910	.088
Implicit theories[a] (centered)	−0.040	0.084	0.221	.638	0.219	0.102	4.614	.032	0.259	0.097	7.112	.008
Interactions (*pride* * implicit theories)												
Health-related	0.106	0.136	0.605	.437	−0.149	0.142	1.094	.296	−0.255	0.131	3.770	.052
Spending-related	−0.021	0.124	0.029	.866	−0.295	0.135	4.762	.029	−0.274	0.134	4.178	.041
Constant	0.316	0.243	1.691	.194	−0.253	0.287	0.775	.379	−0.569	0.271	4.394	.036

[a] Higher values indicate stronger incremental beliefs.

0.99]) as the strength of participants' incremental beliefs increased by one unit relative to the mean. These results provide support for our reasoning that spending-related pride could instill reward-seeking behavior among participants with relatively stronger incremental beliefs.

At this point, however, it is still unclear if health-unrelated pride might also promote healthful food choices among entity theorists. The significant interaction effect between health-unrelated pride and implicit theories implies that people with stronger entity beliefs (i.e., decreases in implicit theories relative to the mean) are more likely to prefer the fruit and nut box relative to the candy box. However, spending-related pride generally did not seem to have as a strong effect on food choice healthiness as health-related pride. As such, health-related pride still seems to be more beneficial to increasing the likelihood of making a healthy food choice among participants with relatively stronger entity beliefs.

4.4. Discussion

In Study 1, we find preliminary support for our theorizing that the recall of health-related pride could serve as a motivational tool among entity theorists (H1 supported). However, we did not find unambiguous support that health-related pride could further boost incremental theorists' food choice healthiness: while it appeared that incremental theorists' food choice healthiness at least did not decline upon the experience of health-related pride – participants were not more likely to prefer the unhealthier candy box over the fruit and nut box as a function of their implicit theories – it also did not increase (H2a not supported).

Nevertheless, we find support that the effect of health-unrelated pride on food choice healthiness depended on implicit theories: participants became less likely to show strong preference for the healthier option in the health-unrelated pride condition, the stronger their incremental beliefs were (H2b supported). This finding aligns with previous research in the pride literature: the recall of pride experiences unrelated to a focal choice domain can sometimes promote hedonic consumption at the cost of people's long-term goals (e.g., Salerno et al., 2015; Wilcox et al., 2011). At this point, it is still somewhat unclear to what extent food choice healthiness among entity theorists could be increased through the elicitation of health-unrelated pride. Although entity theorists seem to respond more favorably to health-unrelated pride than incremental theorists, health-unrelated pride may still not increase food choice healthiness as much as health-related pride does. As such, these findings provide an indication that an intervention based on health-related pride may be more beneficial to both entity and incremental theorists – health-unrelated pride would probably backfire among incremental theorists by instilling reward-seeking behavior.

One limitation of this study was that the comments of some participants reflected some doubt as to whether the lottery was real and they would actually receive the products despite the use of incentive alignment. Consequently, participants' reactions may have been less strong than they could have been with an immediate choice. In addition, participants' lottery ticket allocation may have been influenced by taste preferences we did not control for. Although we tried to account for this possibility by excluding participants who overtly expressed distaste of one of the options, some remaining participants may have been influenced by their general liking of the products. The large number of extreme responses on the lottery allocation task (i.e., participants either assigning 0 or 7 tickets to the fruit and nut box) may have been partly driven by such preferences above and beyond the experience of different types of pride.

Further, we measured participants' general implicit self-theories instead of their specific beliefs regarding the malleability of their body weight. A meta-analysis on implicit theories of intelligence and academic achievement suggests that implicit theory scales specific to an academic domain (e.g., mathematics, languages) more strongly affect academic performance and outcomes than general implicit theories of intelligence scales (Costa & Faria, 2018). We chose to use a domain-general measure of implicit theories as a more conservative test of our theorizing. However, in hindsight the measure we administered may have been too removed from the domain of healthy food choices.

Study 2 addressed these concerns. We administered a task that involved a real food choice between two snack alternatives that all participants received directly after the experiment, measured participants' liking of the available choice alternatives, and used a domain-specific implicit theories of body weight scale (Burnette, 2010).

5. Study 2

5.1. Method

5.1.1. Participants and design

This study was conducted in the research lab of a Dutch university ($N = 250$; $M_{age} = 21.9$, $SD = 3.1$; 58% female). Participants were again randomly assigned to one of three conditions, between subjects; we manipulated health-related pride versus health-unrelated pride versus no pride (control condition). Implicit theories of body weight were measured as a continuous moderator for all participants. The data were collected in May 2019. The reported analyses were conducted from May to July 2019. The study was approved by the university's Institutional Review Board and all participants provided informed consent before taking part in the study.

5.1.2. Procedure

Although the previous study offered no sign that participants' beliefs about the malleability of their body weight were affected by the pride manipulation ($F(2, 279) = 0.76$, $p = .469$) or the healthiness of their choice ($F(1, 280) = 0.91$, $p = .340$), as part of Study 2 we ruled out this possibility. The focal study was conducted at the end of a sequence of

four unrelated studies, allowing us to keep the measurement of participants' implicit theories and the emotion induction separate – an unrelated study served as a filler between the measurement of implicit theories of body weight and the focal study. The setup of the focal study was similar to that of Study 1.

5.1.3. Pride elicitation task

We used the same manipulation for health-related and spending-related pride, but we replaced the control condition. In Study 1, some descriptions of participants' regular day were related to weight management behaviors such as exercising, buying groceries, and preparing meals. Therefore, an inadvertent domain overlap could have occurred between the control condition and the health-related lottery choice task. To ensure a complete absence of overlap between the control condition and the subsequent food choice, participants in the control condition were instructed to describe how they put on their shoes and tie their shoelaces. The instructions appear in the supplementary materials.

5.1.4. Dependent measure

After the writing task, participants were shown pictures of two snack alternatives and asked to choose which one they wanted to receive as a token of appreciation before leaving the research lab (e.g., Fishbach & Dhar, 2005; Wilcox et al., 2011). The indulgent choice was a caramel chocolate bar, whereas the relatively healthier choice was a package containing two thin oat biscuits with raisins. The two snacks were similar in weight (one chocolate bar: 45 g versus two oat biscuits: 38 g), while the oat biscuits were less energy-dense (chocolate bar: 205 kcal/100 g versus oat biscuits: 144 kcal/100 g). Before leaving the research lab all participants received their chosen snack.

5.1.5. Liking of chocolate and raisins

Afterwards, participants were asked to indicate how much they generally liked raisins and chocolate (rated on a slider scale from 0 = *not at all* to 100 = *very much*). General likings of chocolate or raisins were measured as covariates since they may influence whether participants were inclined to choose one of the snacks for reasons other than a desire to make healthy food choices. However, owing to a data collection error the liking of chocolate and raisins was measured for only 135 participants. After completing the data collection in the research lab, we contacted all participants and asked them to respond to these two measures again. We received 63 additional valid responses that could be matched with participants' choices in the experiment. Details regarding the additional data collection are provided in the supplementary materials.

5.1.6. Implicit theories of body weight

We used the six-item implicit theory of body weight scale (Burnette, 2010), which is based on the implicit theory of intelligence scale (Dweck, 2000). Sample items of this scale are "You have a certain body weight, and you can't really do much to change it"; "Your body weight is something about you that you can't change very much"; "No matter who you are, you can significantly change your body weight" (1 = *strongly agree* to 6 = *strongly disagree*, $\alpha = 0.85$). Again, all items were coded such that higher scores indicated stronger incremental beliefs of body weight.

5.2. Statistical analysis

Before conducting the analyses, we excluded 16 participants who failed to follow the manipulation instructions within the writing task or who had dietary restrictions. Since we lacked the scores for liking of chocolate and raisins, which we planned to enter as covariates, 52 additional participants had to be excluded. The remaining sample comprised of 183 participants. We ran one set of analyses including the covariates ($N = 234$) and one excluding the covariates ($N = 183$). Analyses excluding covariates are provided in the supplementary materials.

In total, 79 participants chose the relatively healthier oat biscuit, whereas 104 participants chose the chocolate bar, suggesting a fairly even split between both outcomes. Due to the binary nature of the dependent variable, we probed for interactions between health-related and spending-related pride and implicit theories of body weight in a binary logistic regression using Hayes' PROCESS Macro Model 1 (95% CI; 5000 bootstrap samples; Hayes, 2017). We applied PROCESS because it allows for testing the conditional effects of the different types of pride on the likelihood of choosing the healthier snack alternative at different levels of implicit theories of body weight using spotlight analysis: at one standard deviation below versus above the mean, participants display stronger entity versus incremental beliefs, respectively (see e.g., Blackwell, Trzesniewski, & Dweck, 2007). Implicit theories of body weight were mean-centered prior to the analyses ($M = 4.65$, $SD = 1.00$) and pride was indicator-coded with the control condition serving as the baseline. The snack choice was coded as a binary variable, where 1 denoted the choice of the relatively healthier oat biscuit and 0 the more indulgent chocolate bar. Hence, the probability of choosing the oat biscuit served as the dependent measure. The hypotheses and analysis plan for Study 2 were specified prior to the data collection.

5.3. Results

The binomial logistic regression model to predict snack choice healthiness suggests that the model fits significantly better than the null model ($\chi^2(7) = 19.32$, $p = .007$). The Likelihood Ratio test reveals a significant interaction effect between the different types of pride and implicit theories on snack choice healthiness ($\chi^2(2) = 6.41$, $p = .041$). Fig. 1 provides a graphical illustration of the results.

5.3.1. Health-related pride

The results of the moderation analysis yield non-significant but directional support for an interaction effect between health-related pride and implicit theories of body weight ($b = -0.74$, $SE = 0.47$, $p = .116$, 95% CI [-1.67; 0.18]). In line with our prediction that health-related pride boosts snack choice healthiness among entity theorists (H1), a spotlight analysis revealed a significant conditional effect of health-related pride on the probability of choosing the oat biscuit at one standard deviation below the mean of implicit theories of body weight (entity theorists: conditional effect = 1.64, $SE = 0.62$, $p = .008$, 95% CI [0.43; 2.86]). However, again contrary to our prediction that health-related pride may also promote healthful behaviors among incremental theorists (H2a), there was no significant conditional effect of health-related pride on snack choice healthiness at one standard deviation above the mean (incremental theorists: conditional effect = 0.26, $SE = 0.55$, $p = .643$, 95% CI [-0.83; 1.34]). Notably, this interaction was driven by the marginally significant conditional effect of the control condition (control: conditional effect = 0.66, $SE = 0.34$, $p = .056$, 95% CI [-0.02; 1.33]): entity theorists were less likely than incremental theorists to choose the oat biscuit in the control condition.[1] This finding suggests that entity theorists may benefit more from the recall of health-related pride than incremental theorists, whose likelihood of choosing

[1] Given that implicit theories were measured as a quasi-experimental factor and specific to the health domain, the significant conditional effect of the control condition might be indicative of systematic differences in health goal strength between entity and incremental theorists. In a follow-up analysis, we regressed the strength of participants' healthy lifestyle goal on implicit theories of body weight and found that implicit theories of body weight were significantly positively associated with a stronger healthy lifestyle goal, implying that incremental theorists tended to adopt a stronger health goal than entity theorists in the control condition. As such, this finding corroborates previous research on implicit theories of body weight suggesting that people who subscribe to incremental beliefs tend to engage more in healthful behaviors than people who subscribe to entity beliefs (Burnette & Finkel, 2012).

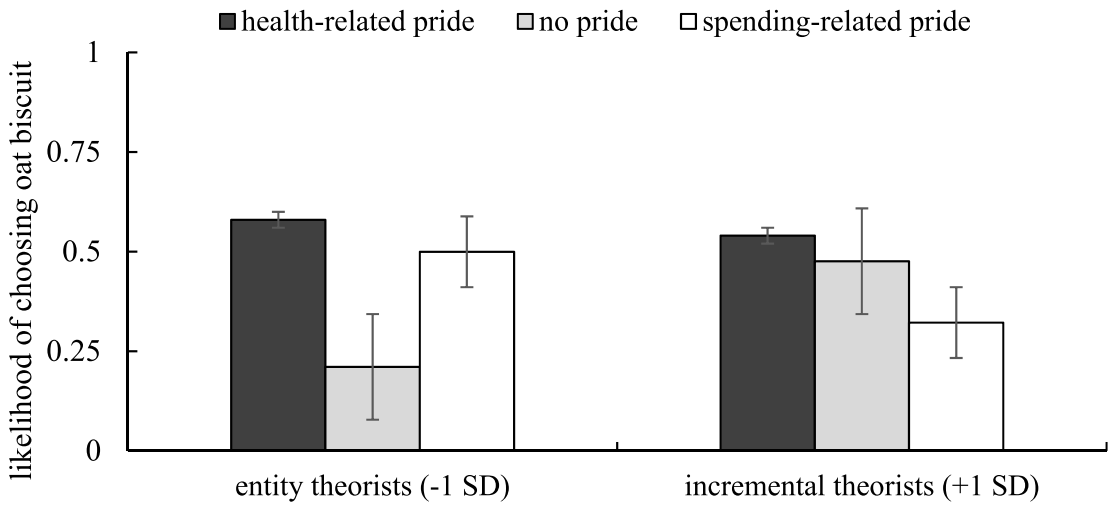

Fig. 1. Likelihood of choosing the oat biscuit (incl. standard errors) as a function of pride (health-related versus spending-related versus control) and implicit theories of body weight.

the oat biscuit in the health-related pride condition was comparable to that in the control condition. We found no significant conditional effect of the health-related pride condition on the likelihood of choosing the oat biscuit (health-related pride: conditional effect = −0.09, $SE = 0.32$, $p = .785$, 95% CI [-0.71; 0.54]). Thus, in the health-related pride condition, entity theorists and incremental theorists were equally likely to choose the relatively healthier oat biscuit over the chocolate bar.

5.3.2. Spending-related pride

We find a significant crossover interaction between spending-related pride and implicit theories of body weight ($b = -1.05$, $SE = 0.44$, $p = .016$, 95% CI [-1.90; −0.20]) with non-significant but directional support for a negative conditional effect of spending-related pride (spending-related pride: conditional effect = −0.40, $SE = 0.27$, $p = .136$, 95% [-0.92; 0.12]). This is in line with our reasoning that an intervention based on health-unrelated pride could potentially backfire among people subscribing to an incremental theory of body weight (H2b).

Spotlight analysis revealed a significant positive conditional effect of spending-related pride at one standard deviation below the mean of implicit theories of body weight (entity theorists: conditional effect = 1.32, $SE = 0.57$, $p = .021$, 95% CI [0.20; 2.44]). That is, entity theorists in the spending-related pride condition displayed a greater probability of choosing the oat biscuit than in the control condition. In fact, comparing the conditional effect of spending-related pride to the conditional effect of health-related pride (i.e., the health-related pride condition is set to zero instead of the control condition) at one standard deviation below the mean of implicit theories of body weight shows that entity theorists were equally likely to choose the relatively healthier oat biscuit in both pride conditions (entity theorists: conditional effect = −0.32, $SE = 0.55$, $p = .558$, 95% CI [-1.41; 0.76]). This finding suggests that entity theorists might be motivated by the recall of pride irrespective of the relatedness to the domain of the focal choice.

When the conditional effect of spending-related pride is tested at one standard deviation above the mean of implicit theories of body weight, it becomes statistically insignificant (incremental theorists: conditional effect = −0.65, $SE = 0.55$, $p = .243$, 95% CI [-1.74; 0.44]). However, when tested against health-related pride (i.e., the health-related pride condition is set to zero instead of the control), the conditional effect of spending-related pride among incremental theorists exhibits non-significant but directional support for a negative conditional effect (incremental theorists: conditional effect = −0.91, $SE = 0.55$, $p = .098$, 95% CI [-1.98; 0.17]), providing additional support for H2b. This pattern of results is in line with the outcome of Study 1 and suggests that incremental theorists' responses are not significantly affected by the recall of health-related pride, but tend to show a lower inclination to choose the healthier option upon the recall of spending-related pride.

5.3.3. Discussion

Overall, the results of Study 2 align with the outcome of Study 1 and offer additional support for our reasoning that the recall of pride from past achievements could be a tool to stimulate people to make healthier food choices. How beneficial pride is, might depend on both the degree to which people perceive their body weight as something they can change and the relatedness of the pride-eliciting achievement to the health domain.

Health-related pride appears to motivate entity and incremental theorists to make equally healthy choices (H1 supported). Given entity theorists' lower inclination to choose healthy food in the absence of pride, health-related pride could be a particularly useful tool in motivating them to make healthier food choices. As for spending-related pride, Study 2 reveals that even a pride experience unrelated to the health domain could motivate entity theorists to make healthier choices. This finding aligns with the self-efficacy literature, which suggests that although past behavior is more likely to enhance perceptions of self-efficacy, the more similar domains are, even achievements that occurred in contexts unrelated to the focal domain can restore perceptions of low self-efficacy (Bandura, 1977). We speculate that the ability to resist potential temptations and make choices that are beneficial to one's longterm goals may be important within both the health domain and spending domain. As such, pride experiences in the spending domain may have been indicative of a more general sense of self-regulatory self-efficacy that participants were able to apply to a choice context in the health domain irrespective of the source of pride.

Conversely, we repeatedly find that the source of a recalled pride experience *does* seem to matter among incremental theorists. Although incremental theorists on average were at least equally likely to choose the healthier option in the health-related pride condition relative to the control condition, health-related pride again did not seem further increase their preference for the healthier option (H2a not supported). However, incremental theorists again appeared to be less likely to choose the relatively healthier oat biscuit upon the recall of spending-related pride compared to health-related pride thereby replicating the

effect we found in Study 1 (H2b supported).

6. General discussion

Past research has investigated the role of beliefs in the malleability of personal attributes in motivating people to pursue their goals. The burgeoning research on the effect of such beliefs in the weight management domain suggests that incremental theories (beliefs that body weight is malleable through effort) are more adaptive in promoting the engagement in healthful behaviors than entity theories (beliefs that body weight is fixed and unchangeable; e.g., Burnette & Finkel, 2012; Ehrlinger et al., 2017). The present research sought to find a way of motivating entity theorists to engage in more healthful behaviors that does not thwart incremental theorists' motivation. We drew on the literature on self-conscious emotions and suggested that the recall of pride from a past achievement could be a viable motivational tool to help people with entity beliefs to make healthier choices. Specifically, in an online study (Study 1) and a lab experiment (Study 2), we investigated the extent to which entity and incremental theorists make healthy food choices upon recall of pride experiences related (a previous healthy food choice) and unrelated (a previous spending decision that allowed them to save money) to the health domain. Overall, our findings seem to suggest that health-related pride may be the more suitable motivational tool. Across both studies we find that health-unrelated pride experiences appear to instill reward-seeking behavior among incremental theorists, whereas health-related pride boosts entity theorists' motivation to engage in weight management practices without diminishing incremental theorists' motivation.

This pattern of results may set the effect of pride apart from other types of self-affirmations, such as writing about one's personal values (Sherman & Cohen, 2006). Past research reveals that self-affirmations can induce people who would not have needed an affirmation to be less motivated to pursue a focal goal (e.g., Churchill, Jessop, Green, & Harris, 2018). Recalling pride related to a past health-related event may circumvent this issue because it may not only function as a self-affirmatory device among entity theorists, but may also signal the desirability of healthful behaviors among incremental theorists, thereby preventing them from using pride as a possible justification for self-reward (De Witt Huberts, Evers, & De Ridder, 2014; Prinsen, Evers, & de Ridder, 2016).

This research contributes to the growing stream of literature studying how implicit theories affect health-related outcomes such as dieting (e.g., Burnette & Finkel, 2012), exercising (Lyons et al., 2015), and smoking cessation (Thai et al., 2018). In this literature, the notion seems to prevail that incremental beliefs are more adaptive with regard to many aspects of the self-regulation process as they stimulate learning and instill a greater resistance to setbacks than entity beliefs (e.g., Burnette et al., 2013). Given these findings, interventions targeting people with an entity mindset aim at shifting individuals' beliefs toward an incremental mindset. However, more recent evidence suggests that incremental beliefs can also have negative side effects. Incremental theorists tend to endorse the view that everyone could change through effort if only they wanted to (Kammrath & Peetz, 2012). As such, incremental theorists display a tendency of attributing failure to change one's body weight to lack of effort. These onset responsibility attributions have been shown to directly predict stronger body shame among incremental theorists (Burnette et al., 2017). Similarly, past research suggests that public discourse highlighting the societal costs of obesity and individual's own responsibility for their weight induces people who perceived themselves as overweight to snack even more (Mulder, Rupp, & Dijkstra, 2015). Our research revealed that in addition to inadvertently perpetuating the already pervasive weight stigma in our society (Puhl & Brownell, 2003) and potentially even weight gain, incremental beliefs might render people more prone to engage in self-indulgence after past achievements. This highlights the general importance of taking unintended side effects of any kind of intervention into account.

This research also contributes to the pride literature. Although interest has been increasing in the motivational implications of pride experiences that occur in the same (e.g., Gilchrist, Sabiston, et al., 2018; Williams & DeSteno, 2008) or different domains (e.g., Salerno et al., 2015; Wilcox et al., 2011), no systematic experimental investigation has compared the effects of thematically related and unrelated pride. To our knowledge, the only research that looked into the downstream consequences of pride within the same and across different domains of self-regulation was through experience sampling (Hofmann & Fisher, 2012). To date, still lacking is an integrated view of the role that emotions play in enabling or thwarting goal-directed behavior within thematically related domains and across unrelated domains. Our research points to a more nuanced picture of the emotion pride and suggests that whether pride is beneficial for goal-directed behavior in a focal domain depends on both its source and the lay beliefs of the individual. This research may serve as a starting point in stimulating future research efforts to shed more light on the intricate interplay between emotions, contextual, and individual factors in people's goal pursuit.

Previous work on the role of pride in goal pursuit suggests that the way in which pride promotes or impedes people's goal pursuit is distinct from other discrete types of positive affect (e.g., Katzir, Eyal, Meiran, & Kessler, 2010; Shimoni et al., 2016; Williams & DeSteno, 2008). These findings seem to suggest that pride generally does not produce the exact same behavioral outcomes as other discrete positive emotions under the exact same conditions. In fact, the potential to both promote and prevent the pursuit of achievement seems to be specific to pride. Our findings for participants with incremental beliefs mirror this pattern: in both studies, we find traces of reward-seeking behavior upon the recall of health-unrelated pride, but sustained preference for the relatively healthier food options upon the recall of health-related pride. However, while our findings for participants with entity beliefs suggest that pride is definitely playing a role in motivating healthier food choices, it is possible that other positive emotions can also boost people's self-efficacy. Pride is particularly diagnostic of people's competence to engage in a certain goal-directed behavior because it is grounded in an internal attribution of a self-relevant achievement. Nevertheless, research on the "broaden and build effect" suggests that general positive affect can also boost people's general sense of self-efficacy by giving them a feeling of resourcefulness (e.g., Schutte, 2014). Given that several types of positive emotions usually tend to co-occur with the experience of pride (Mills & D'Mello, 2014; Trampe, Quoidbach, & Taquet, 2015), future research may compare the domain-specific effects of pride to those of other discrete positive emotions to ascertain which positive emotions are most potent in boosting people's sense of self-efficacy.

Moreover, the mechanism underlying the response patterns we found among entity versus incremental theorists suggests paths for future exploration. Past research has shown that the different behavioral responses of entity and incremental theorists are rooted in the different attributions they make as to the causes of their personal achievements and failures (Hong et al., 1999). Whereas entity theorists regard achievements as a sign of their personal ability, incremental theorists regard achievements as a sign that they invested enough effort. We suspect that these different attributions explain why entity theorists engage in more weight management behavior when recalling both health-related and health-unrelated pride. While entity theorists may benefit from the recall of both health-related and health-unrelated pride experiences through a potential self-affirmatory mechanism boosting their sense of self-regulatory self-efficacy, incremental theorists show traces of reward-seeking behavior upon the recall of health-unrelated pride, potentially invoking a justification-based mechanism (De Witt Huberts et al., 2014; Prinsen et al., 2016). Future research may also devote greater attention to the content of these justifications. For instance, health-unrelated pride may promote indulgence through erroneous inferences of sufficient health goal progress (e.g., Salerno

et al., 2015; Wilcox et al., 2011), through the feeling of being deserving of reward due to previous effort (e.g., Mukhopadhyay & Johar, 2009), or through a more positive self-view (Khan & Dhar, 2006). Once we know how exactly people justify indulgence in response to pride experiences, we might be better able to mitigate behaviors that disrupt people's long-term goal pursuit.

Another question emerging from the finding that health-unrelated pride can promote indulgent behavior relates to when a recalled pride experience is *unrelated enough* to a focal domain to justify indulgence without compromising a positive view of the self. In this research, we treated the concept of relatedness as a dichotomy – an achievement was either related or unrelated to the domain of weight management. However, in reality achievements may exhibit a continuum of relatedness, warranting a more nuanced operationalization of domain relatedness. For instance, how would getting regular medical checkups or maintaining a healthy sleep pattern affect people's motivation to make healthy food choices? Further, the continuous nature of domain relatedness also offers some leeway for motivated reasoning. Prior research suggests that dieters who want to indulge intentionally distort the unhealthiness of food they resisted in the past so as to allow themselves to indulge more in the present (Effron, Monin, & Miller, 2013). In light of these findings, might incremental theorists perceive prior achievements as less related to a focal choice domain if they are motivated to seek indulgence? Future research could look into this possibility.

On a similar note, there is an ongoing debate about the categorization of people into incremental and entity theorists in the literature on implicit theories (see Lüftenegger & Chen, 2017). Despite the fact that implicit theories are conceptualized as comprising of a continuum with entity versus incremental theories anchored on opposite ends, entity versus incremental theories are empirically oftentimes treated as a dichotomy (e.g., categorization at M ± 1 SD, see Blackwell et al., 2007, or a fixed cutoff point, see Dweck, Chiu, & Hong, 1995). We follow previous research in referring to entity versus incremental theorists as they were a dichotomy, but want to note that the distinction between these two types of beliefs may be more nuanced. However, there are, to date, no clear conceptual criteria to differentiate between incremental and entity theorists (Lüftenegger & Chen, 2017). Due to the lack of clear categorization criteria, the differences we find between entity and incremental theorists may be regarded as relative in nature. While incremental theorists *relative* to entity theorists appear to be more prone to reward-seeking behavior upon the recall of health-unrelated, we do not know *when exactly* someone's incremental beliefs of body weight may be strong enough to promote such reward-seeking behavior. Future research is needed to develop better distinctions between entity and incremental theorists that are theoretically meaningful and free of methodological concerns associated with dichotomization (MacCallum, Zhang, Preacher, & Rucker, 2002).

Finally, yet importantly, we began this investigation to find a route to motivating entity theorists to engage in more weight management practices that do not involve changing their mindset. Our findings suggest that the healthiness of entity theorists' food choices can be increased through the recall of pride both related and unrelated to the health domain. Future research might compare the effectiveness of these alternate routes for motivating entity theorists.

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Author contributions

J. Storch conceived of the study, designed the experiments, collected the data, performed the analyses, and wrote the manuscript. J. Wan and K. van Ittersum supervised the project and contributed at all stages of the project through the provision of their guidance. All authors have approved the final article.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.appet.2020.104841.

Ethical statement

The authors declare that the studies in this article received ethical approval by the university's Institutional Review Board as part of the data management procedure. The corresponding reference numbers are FEB-20190311-7838 (Study 1) and FEB-20190507-8981 (Study 2). The authors confirm that all participants were informed about the data collection procedure and that all participants gave informed consent prior to their participation in the studies. The authors further verify that assent for youth was appropriate and that all research data were treated anonymously.

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